

SILICON CARBIDE SEMICONDUCTOR DEVICE AND FABRICATION METHOD THEREOF

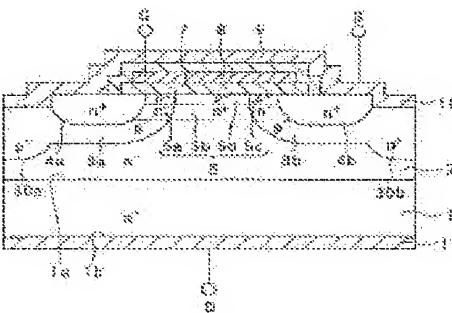
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Abstract of JP 2001094096 (A)

PROBLEM TO BE SOLVED: To decrease ON resistance furthermore in a storage mode MOSFET. **SOLUTION:** A surface channel layer 5 comprises n-type channel layers 5a, 5b formed to touch the surface parts of p-type base regions 3a, 3b and an n-type epi layer 2, and p-type channel layers 5c, 5d formed on the n-type channel layers. Since a channel is formed in the n-type channel layer located beneath the p-type channel layer touching a gate oxide film 7 and a current can be fed thereto when a PN junction is formed in the surface channel layer 5, a channel can be formed regardless of the roughness or residual defect of the interface (MOS interface) between the gate oxide film 7 and the surface channel layer 5. Consequently, mobility of channel can be enhanced while decreasing ON resistance.



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AMANO SHINJI**

(54) **SILICON CARBIDE SEMICONDUCTOR DEVICE  
AND FABRICATION METHOD THEREOF**

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(57) Abstract:

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